

## REMARKS

Claims 2-8, 11-19, 21-27, 32-37 and 41-45 are pending in the application.

Claims 2-8, 11-19, 21-27, 32-37 and 41-43 are rejected under 35 U.S.C. 103(a).

Claim 8 is amended. Specifically, claim 8 is amended to recite "...wherein a gas path included *in* one of the circular plates and a gas path included in another of the plates are in fluid communication with each other via the gap..." (*emphasis added*) Applicants respectfully submit that this amendment addresses a minor grammatical error and does not "necessitate" a final Office Action within the meaning of M.P.E.P. § 706.07(a).

Claims 44 and 45 are added.

No new matter is added.

Applicants request reconsideration and allowance of the claims in light of the above amendments and following remarks.

### ***Claim Rejections – 35 U.S.C. § 103***

Claims 2-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,132,512 issued to Horie et al. (hereinafter "Horie"). Applicants respectfully traverse this rejection.

Rejecting claim 8, the Office Action asserts that the heating liquid medium passage D shown in FIG. 12B of Horie reads on the claimed gap and that portions of material gas passages C extending through the disks 31 and 32, also shown in FIG. 12B of Horie, read on the claimed gas paths. Thus, the Office Action asserts that the portions of material gas passages C extending through the disks 31 and 32 are in fluid communication with each other via the heating liquid medium passage D. Applicants respectfully disagree.

At column 11, lines 21-31, Horie teaches:

The disk 30 also has a plurality of nozzle orifices 24 defined in ridges between the liquid passage grooves 30a in the upper and lower surfaces thereof. The nozzle orifices 24 extend through the disk 30 and also the disks 31, 32 between the upper and lower surfaces thereof, for ejecting a mixture of material and oxide gases therethrough. The disk 30 and the upper and lower disks 31, 32 are hermetically joined by a thermal diffusion joining process to provide a complete seal between material gas passages C including the nozzle orifices 24 and the heating liquid medium passages B, B'.

At column 11, lines 37-41, Horie teaches:

The annular common liquid passage member 25 is hermetically joined by a thermal diffusion joining process to the disk 31, 32 to provide a complete seal between the heating liquid medium passage D and the material gas passages C.

In view of the actual teachings of Horie reproduced above, it is clear that the material gas passages C are completely sealed from the heating liquid medium passages B, B' and D. Because the material gas passages C are completely sealed from the heating liquid medium passage D, portions of material gas passages C extending through the disks 31 and 32 cannot be in fluid communication with each other via the heating liquid medium passage D as asserted by the Office Action.

For at least these reasons, Applicants respectfully submit claim 8 is not rendered obvious by Horie.

Claims 11-19, 21-27, 32-37 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horie in view of U.S. Patent No. 6,544,380 issued to Tomoyasu et al (hereinafter “Tomoyasu”). Applicants respectfully traverse this rejection.

Applicants note that the current rejection of claims 11, 12, 16, 19, 27, 34 and 37 is identical to the rejection of the claims as presented in the Office Action mailed November 28, 2007. Accordingly, the arguments presented at: page 12, line 28-page 14, line 9 of Applicants’ response dated January 28, 2008 (hereinafter “Applicants’ previous response”) (traversing the rejection of claim 19); page 14, lines 13-24 of Applicants’ previous response (traversing the rejection of claim 11); page 14, lines 25-29 of Applicants’ previous response (traversing the rejection of claim 12); page 14, line 30-page 15, line 3 of Applicants’ previous response (traversing rejection of claim 16); page 15, lines 4-6 of Applicants’ previous response (traversing the rejection of claim 27); page 15, lines 11-13 of Applicants’ previous response (traversing rejection of claim 34); and page 15, lines 14-16 of Applicants’ previous response (traversing rejection of claim 37), remain applicable and are fully incorporated herein by reference.

**Applicants note that the current Office Action maintains the rejection of claims 11, 12, 16, 19, 27, 34 and 37 without answering, let alone addressing, the substance of the aforementioned arguments incorporated herein. If the current rejection of claims 11, 12, 16, 19, 27, 34 and 37 is to be maintained, Applicants request that the substance of each of these arguments be answered to provide a clear explanation as to why these arguments are**

**deemed unpersuasive. See M.P.E.P. § 707.07(f). Otherwise, Applicants respectfully request withdrawal of the current rejection of claims 11, 12, 16, 19, 27, 34 and 37.**

Further rejecting claim 27, the Office Action asserts that the inlet ports 25b<sub>1-3</sub>, the outlet ports 25c<sub>1-3</sub> and the heating liquid medium passages B and B', all shown in FIG. 10 of Horie, are arranged in the disk 32 shown in FIG. 12B of Horie. Applicants respectfully disagree.

The boundaries of the inlet ports 25b<sub>1-3</sub> and the outlet ports 25c<sub>1-3</sub> are defined by surfaces of the disk 32 and the disk 31. Moreover, the boundaries of the heating liquid medium passages B' are defined by surfaces of the disk 32 and the disk 30 (no boundaries of the heating liquid medium passages B are defined by the disk 32). Because boundaries of the inlet ports 25b<sub>1-3</sub>, the outlet ports 25c<sub>1-3</sub>, and the heating liquid medium passages B' are defined by surfaces of structures other than the disk 32, none of the inlet ports 25b<sub>1-3</sub>, the outlet ports 25c<sub>1-3</sub>, or the heating liquid medium passages B' are arranged in the disk 32 as shown in FIG. 12B of Horie.

For at least these additional reasons, Applicants respectfully submit the combination of Horie in view of Tomoyasu fails to render claim 27 obvious.

In the “Response to Arguments” section, the Office Action notes that “all parts 30-32 of Figure 12B define and convey the numerous heating liquid medium passages.” Applicants agree. However, none of the inlet ports 25b<sub>1-3</sub>, the outlet ports 25c<sub>1-3</sub>, or the heating liquid medium passages B' of Horie are arranged in the disk 32 shown in FIG. 12B of Horie, as required by claim 27.

For at least these additional reasons, Applicants respectfully submit the combination of Horie in view of Tomoyasu fails to render claim 27 obvious.

Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horie in view of Tomoyasu, and in further view of U.S. Patent No. 4,534,816 issued to Chen et al. (hereinafter “Chen”). Applicants respectfully traverse this rejection.

Applicants note that the current rejection of claims 42 and 43 is identical to the rejection of the claims as presented in the Office Action mailed November 28, 2007. Accordingly, the arguments presented at page 16, lines 1-19 of Applicants’ previous response remain applicable and are fully incorporated herein by reference.

**Applicants note that the current Office Action maintains the rejection of claims 42 and 43 without answering, let alone addressing, the substance of the aforementioned**

**arguments incorporated herein. If the current rejection of claims 42 and 43 is to be maintained, Applicants request that the substance of each of these arguments be answered to provide a clear explanation as to why these arguments are deemed unpersuasive. See M.P.E.P. § 707.07(f). Otherwise, Applicants respectfully request withdrawal of the current rejection of claims 42 and 43.**

*New Claims*

Support for new claims 44 and 45 can be found at, for example, FIG. 1 of the specification as originally filed.

**CONCLUSION**

For the foregoing reasons, reconsideration and allowance of the pending claims of the application as amended is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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